SUPPORTING ONLINE LEARNING THROUGH WEB BASED INITIATIVE

Teo Hui Thian
Faculty of Education and Languages
Open University Malaysia
Jalan Tun Ismail
50480 Kuala Lumpur
e-mail: jteo@oum.edu.my
Phone: +60 3 2773 2740
Fax: +60 3 2697 8937

[Abstract] *As IT permeates deeper and deeper into our lives, online learning is now a viable option for many. Gone are the eras where owning a computer is unthinkable of for the masses and handlings of computers are left to the experts. Most people nowadays own a computer in one form or another. With the rapid advancement in IT and high broadband usage, opportunities to continue learning and to upgrade oneself are now becoming more attractive and possible through ODL institutions. While the main focus for many online institutions is to provide reliable and adequate technical infrastructure to ensure smooth delivery of contents and to ensure the incorporation of e-learning features into their pedagogy, many miss out on the need of a good support system to scaffold learning. OUM is open to change and willing to try out new ideas for the sake of its learners. PAQEES was developed as an experimental one stop portal to support online learning ecosystem for a (selected) programme. It consists of seven components that are accessible 24/7 to its learners. Components are created based on learners' feedback and are designed to provide learners with rich user experience to facilitate and provide an even richer learning environment. With this learning support system in place OUM hopes to take e-learning in Malaysia to a notch higher.*

[Keywords] PAQEES, learning support system, ODL, e-learning, scaffolding, TESL

Introduction

The rapid development in computer technology and the popularity of the Internet have exponentially increased the number of people connected to the World Wide Web in various economies. About a decade ago, only about 13% of Malaysian is connected to the internet according to Internet World Stats as compared to now, 58.8% in the first quarter of 2011, a 356.8% growth (see Table 1). Malaysia's internet connection has also impressively moved along with technology beginning from dial-up to the speedy broadband via various means such as copper lines, fibre optics, WiFi and WiMAX. This is made possible, according to Malaysian Communication and Multimedia Commission (MCMC) website, through the National Broadband Initiative which targeted more that 50% penetration by 2010 using the three pronged strategy quoted below:

"*In order to achieve household penetration of 50%, an emphasis on supply alone is insufficient. There must be an effective strategy to encourage demand for broadband. Therefore, emphasis will be given to three aspects of demand, they which are Awareness, Attractiveness and Affordability."*
(www.skmm.gov.my/index.php?c=public&v=art_view&art_id=36)

Today, names like Facebook, Twitter, Google, Yahoo and many others are no longer alien to many Malaysians. In fact, Malaysian Facebook users have the highest number of "friends" in the world with an average of 233 friends beating Brazil (231) and Norway (217) according to the international firm TNS.

INTERNET USAGE AND POPULATION

	Population (2011 Est.)	Internet Users, (Year 2000)	Internet Users, Latest Data	Penetration (% Population)	User Growth (2000-2011)	Users (%) in Asia
Malaysia	28,728,607	3,700,000	16,902,600	58.8 %	356.8 %	1.8 %

Table 1: Malaysia's Internet Usage and Population.

The surge in the number of internet users translates well with an Online Distance Learning (ODL) institution like Open University Malaysia (OUM) in terms of opportunities to increase number of learners and promoting lifelong learning. While both opportunities can be viewed as inter-dependent, reliable and speedy internet infrastructure would ensure its viability. An ODL institution relies heavily on the internet infrastructure as backbone to push contents, support learning, manage learners and monitor assessments. According to Khalid, Yusof, Heng, and Yunus (2006) as quoted by Goi and Ng (2009);

"The rapid growth of web-based technologies and the high usage of the Internet have made teaching and learning via the Internet, or e-learning, more viable in recent years. Many universities and educationally-based industries have set up portals to offer an e-learning environment either as teaching aids to support conventional teaching approach or as a teaching medium for long-distance or off-campus programs."

ODL also opens up new opportunities to a different group of learners such as the working adults as pointed out by Goi & Ng (2006);237-246

"e-learning provides more learning opportunities to adults who are no longer of the formal education age which ranges of from 17-25 years."

These working adults have different needs and expectations of learning that requires a different approach. Lindeman (1926), as quoted by Knowles, Holton and Swanson (2005), provided a useful insight into what adult learning should be about:

"The approach to adult education will be via the route of situations, not subjects. Our academic system has grown in reverse order; subjects and teachers constitute the starting-point, students are secondary. In conventional education the student is required to adjust himself to an established curriculum; in adult education the curriculum is built around the student's needs and interests. Every adult person finds himself in specific situations with respect to his work, his recreation, his family-life, his community-life et cetera - situations which call for adjustments. Adult education begins at this point. Subject matter is brought into the situation, is put to work, when needed. Texts and teachers play a new and secondary role in this type of education; they must give way to the primary importance of the learner..."

This theory can be further comprehended by looking at the principles that guides the learning and strategies that work for the adult learners. Fogarty and Pete (2004) sum up that adult learners concern themselves with basically five important areas; *priorities, pragmatic, immediacy, collaboration* and *relevance*. In other words, adult learners have other priorities to consider besides learning, wants learning to be practical for them, able to use learning tools without much hassle and right away, work in a team environment with peers and engage in meaningful learning.

Accordingly, teaching adult learners can be very demanding and challenging as each learner brought with him/ her different experience, expectations and concerns into the learning ecosystem. The roles of the teachers teaching these adult students are different as they are not only imparting knowledge per se to their students but are more likely to be drawn into a discourse based on various experiences and backgrounds the students brought with them. This can be time consuming and exhaustive. Thus supporting this type of learning became very important in a lean ODL institution like OUM.

Supporting Learning

Learning in an ODL mode using the blended approach is a little bit different from the conventional learning found in mainstream universities. OUM subscribes to the blended pedagogy approach which simply means learners engaged in learning through three main elements: face-to-face tutorials, online learning, and self-managed learning. There are plenty of supports available to learners, ranging from in-house learning management system to online assignments' submission. However, there are challenges that needs to be addressed with the learning management system as stated by Fadzil and Abdol Latif (2010);

"The learning management system (LMS) which was developed in-house by OUM's staff since the beginning of the university's operations in 2001 serves as the main e-learning platform. Although the LMS is fairly stable and secure, learners found it not too user-friendly, the navigation tool can be quite cumbersome and access can sometimes be quite slow."

User 'un'-friendly screen design is not something new. Surf a few websites and this experience will unconsciously, in your mind, categorise which website you will frequent and which you will totally abandon. According to Galitz (2002), the main issue here is interface distractions and Howlett (1995) provides a little more details on what the distractions constitute:

Galitz (2002) *"Poor design is not a new phenomenon. It has existed since people began interacting with media used for presenting and collecting information. Some of the distractions have been around a long time; others are fairly new, the by-product of technological advances. Interface distractions cause a person to think about things they shouldn't have to think about, and divert one's attention from performing a task or satisfying a need. All distractions must be eliminated in design."*

Howlett (1995) "*based upon her experiences at Microsoft suggests the most common problems in visual interface design are:*

- *Visual inconsistency in screen detail presentation and with the operating system.*
- *Lack of restraint in the use of design features and elements.*

- *Overuse of three-dimensional presentations.*
- *Overuse of too many bright colours.*
- *Poorly designed icons.*
- *Bad typography*
- *Metaphors that are either overbearing or too cute or too literal thereby restricting design options.*

These kinds of problems, she concludes, lead to screens that can be chaotic, confusing, disorganized, distracting, or just plain ugly."

Besides human interface, another main concern when designing a website would be how users navigate to get what they want around the website. If searching for information takes too long user might navigate away to the next website. With this in mind, navigation should be straight forward and 'lost-proof' in order for users not to be overwhelmed with layers of information and complex navigation. Krug (2006) summarises it well in his book, *Don't Make Me Think!*, when he said:

When we're creating sites, we act as though people are going to pore over each page, reading our finely crafted text, figuring out how we've organized things, and weighing their options before deciding which link to click. What they actually do most of the time (if we're lucky) is glance at each new page, scan some of the text, and click on the first link that catches their interest or vaguely resembles the thing they're looking for. There are usually large parts of the page that they don't even look at.

Personalised Learning Support

The next evolution of the WWW, unofficially labelled Web 3.0, talked about 'Semantic Web' or data with meaning where search engines, apps and bots understand and work together making meaning out of data and help users find what they are looking for more efficiently and accurately, pull and display only information relevant to their search perimeter and suggests relevant sites based on their search history or online behaviours. It would be like having a personalised 'electronic' butler that does all the works in the background and handed to us only what we need, want or expect regardless of where we are or what devices we are on. The American Society for Training and Development (ASTD) defines Web 3.0 as:

"Web 3.0 represents a range of Internet-based services and technologies that include components such as natural language search, forms of artificial intelligence and machine learning, software agents that make recommendations to users, and the application of context to content. By making data more understandable to machines, it also makes information easier to find and more understandable to people. Ultimately, it makes data integration and access easier, helping to usher in an era of seamless connectivity to a smarter web, regardless of device."

This personalised web service will change how we interact, use and augment information to our benefit. Moving in the same basic direction, an experimental portal is created in OUM to see if this would help support and enhance learning by collating all meaningful resources relevant to the target learners in one place. The portal has small and specific target audience which is a small fraction of the total population of learners in OUM. These learners are from the Bachelor of Education (TESL) programme thus the websites are design to cater to their needs.

The Portal for the Advancement of Quality English Education and Support (PAQEES)

PAQEES initially has seven independent components design to operate as a standalone or collectively to enhance the target programme (see Figure 1). Each of the seven websites has different function and focuses on different aspects of supporting online learning. The components are further described in Table 2 below:

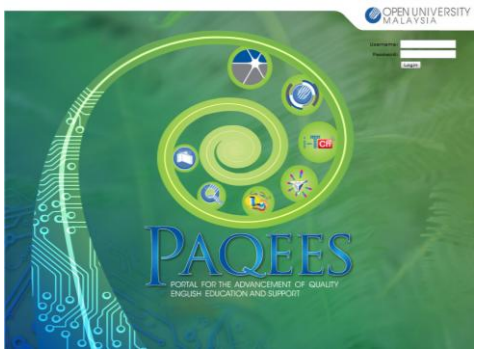

Figure 1: BE TESL One-stop support centre

	Component	Acronym	Description
1.	Electronic Gateway to English Resources	e-GATE	English Resources Centre/ Portal.
2.	Project: Blue Eyes	ProBE	Platform for English Language campaign.
3.	Internet Tutorial Channel	i-TCh	Video based tutorial sessions
4.	Personal Retrievable & Interactive Self-reading Module	PRISM	Electronic modules
5.	Can Talk?!	Can Talk?!	Live chat session
6.	QVault	Under development	Question Bank
7.	Forum/ Wall	Under development	Forum/ Bulletin board

Table 2: Components of PAQEES

With the recent development in Google resources, specifically Google+, two of the components, Can Talk?! and Forum/ Wall, are being re-evaluated with the strong possibility of both being consolidated and replaced with Google+. Early encounter with Google+ seems to suggest that this new resource is capable to offer all the needed functions for an online community and social networking.

Keeping in mind the challenges faced by the learner management system earlier, PAQEES and its components are design to be simple, straightforward and incline more towards Graphical User Interface (GUI) rather than text based interface. The web designs also took into account the loading time, layers of information, lost-proof navigation and overall appeal to provide rich user experience and ensure high user satisfaction.

The first component of PAQEES is the English Resource Centre/ Portal (e-GATE). It was design to be very simple with only lines and typeface offering a dashboard view of all its main content. Contents are selected and vetted to suit the needs of the TESL programme (Figure 1).

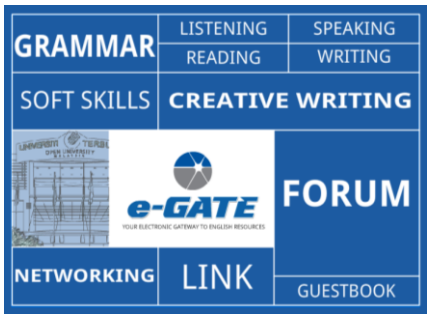

Figure 2: English Resource Centre/ Portal

The second component is a platform for English campaigns called Project: Blue Eyes (ProBE). It is ready to host up to 5 campaigns simultaneously (see Figure 2). Currently it is hosting 'Respond & Win Contest', a multi-media respond contest where users respond to a given stimulus using text, image, video or audio. This is to encourage learners to practice the language.

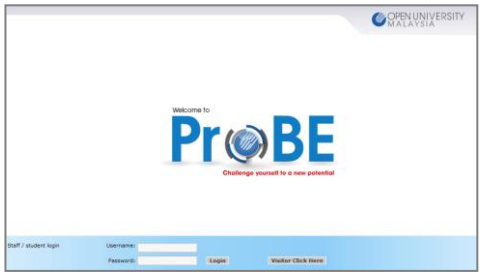

Figure 3: English Language Campaign Website

The third component is an Internet Tutorial Channel (i-TCh) featuring recorded tutorial videos developed by our Centre for Instructional Design and Technology. These tutorial videos are available to students 24/7. With this channel in place (see Figure 3), students are more empowered to learn at their own pace and schedule.

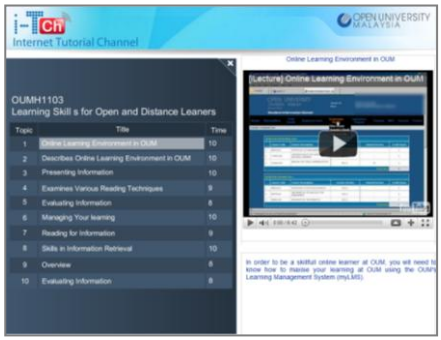

Figure 4: Internet Tutorial Channel

In order to support the print module, an online version in .pdf format is available for them to annotate. Users can see the electronic copies of their modules in PRISM website which

stands for *Personal Retrievable & Interactive Self-reading Module* (see Figure 4). This can be done by instructing the users to first download *Adobe Reader X* which is a free download. Once this is done users can bookmark, highlight, add note and use many other features available from Adobe.

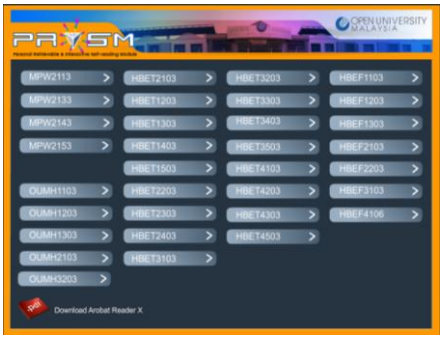

Figure 5: Electronic modules

Besides the availability of learning content which is supported in various media, PAQEES is also equipped with a chat program, Can Talk?! (see Figure 6) and forum for networking, discussion and feedback. As mentioned earlier with the recent introduction of Google+ which functions like a combination of Facebook and Twitter, the possibility of this new program to replace the two components are most likely. Furthermore Google+ offers more powerful features for social networking and collaboration with easy drag and drop interface.

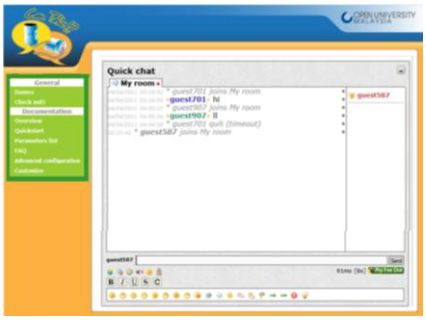

Figure 6: Chat program

The last component of PAQEES that has yet to be developed is the question bank (QVault) where past years questions are kept so learners can retrieve them easily to practice and familiarise themselves with the exam question and format.

Conclusion

While the advancement in internet technology makes it easier for institutions to deliver content and learners to access learning, it is the simplicity of accessing information and empowerment of learning that will eventually help learners to succeed and make online learning appealing to the masses. This experimental portal hopes to deliver just that to its users. While most of the components in PAQEES are still in testing and development stages, one of its components has been in use since February 2010. Thus far e-GATE http://egate.oum.edu.my has been getting good feedbacks based on the posting in its guestbook. In general, PAQEES hopes to act as a contingency plan for its users in the event of the unavailability of face-to-face tutorials. It is also a created to add value to the BE TESL

programme by empowering learners with learning tools that are available 24/7. With these added values it is hope that learners will benefit more and will find ODL an appealing choice towards embracing lifelong learning. It is OUM's vision that one day learning will be individually customised from content to support.

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